

## SCHULICH DENTISTRY 2013 Research News

### 2013 DECEMBER

#### Schulich Dentistry IRG (Internal Research Grant Program) Competition Results

Congratulations to Dr. Ali Tassi (Assistant Professor, Graduate Orthodontics), who was awarded a Schulich Dentistry IRG of \$10,000. Along with his co-investigator, Dr. Yara Hosein, research will begin in the new year on their project entitled 'Self-drilling Efficiency and Primary Stability of Commonly Used Orthodontic Mini-screw Implants: An in vitro Biomechanical Analysis'.

#### Dentistry Seminar Series Presentation

Dr. Hector Rios, David Brigstock, Assistant Professor, Dept. of Periodontics and Oral Medicine, School of Dentistry, University of Michigan. "Novel biological determinants of bone and periodontal regeneration"

### 2013 OCTOBER

#### Dentistry's Research Day Poster Presentations

Congratulations to the following students who received awards for their Poster Presentations at Dentistry's Research Day in October.

#### JUNIOR CATEGORY

##### Award of Research Excellence

- Kathleen Martin, DDS 2015 [Supervised by Dr. D. Hamilton]

##### Travel Awards - The following students will represent Schulich Dentistry:

- Joel Keshwah, DDS 2015 - CDA/Dentsply Student Clinician competition at the 2014 CDA National Convention in Vancouver, BC [Supervised by Dr. Douglas Hamilton]
- Mohammed Garshasb, DDS 2016 - 2014 ADA Foundation Dental Student Research Conference in Maryland [Supervised by Dr. Jacinta Santos]
- Nicole Johnson, DDS 2015 - 2014 Hinman Student Research Symposium in Memphis, Tennessee [Supervised by Dr. Walter Siqueira]

#### SENIOR CATEGORY

##### Merit Awards

- Erik Holm, DCS Student - Dr. Harvey Goldberg Lab
- Barry Lai, BMSc Student - Dr. Amin Rizkalla Lab
- Shawna Kim, DCS Student - Dr. Douglas Hamilton Lab

#### Rajesh Gupta awarded the Dean's Stipend for Graduate Research

Congratulations to Rajesh Gupta (PhD Candidate in Biochemistry) in Dr. Walter Siqueira's lab for being awarded the Dean's Stipend for Graduate Research (\$100K over 4 years). Rajesh's project entitled "Studies on the characterization of salivary antimicrobial peptides and their encapsulation for therapeutic applications" was selected as the top application in a highly competitive Faculty-wide competition. Rajesh will be recognized at the Celebration of Excellence event in the Spring of 2014.

#### Kathleen Martin Receives CADR Student Research Award

Kathleen Martin's (DDS 2015) application placed first in the Junior Category of the Canadian Association for Dental Research (CADR) Student Research Award competition. Kathleen was selected to receive a travel award to present her research at the AADR/CADR meeting in Charlotte, NC in March 2014.

## 2013 SEPTEMBER

### Hinman Student Research Travel Award

Congratulations to Joel Keshwah - DDS 2015 (Hamilton Lab) "*The effects of surface nano-topographies on osteoblast adhesion, migration and fibronectin fibrillogenesis*". The goal of the Hinman Student Research Symposium is to help raise and maintain the quality of dental research and education by encouraging participation of dental students, graduate trainees, and dental school faculty in research to improve oral health care. Joel will be representing Schulich Dentistry at the 2013 Hinman Student Research Symposium to be held on Oct 25-27 in Memphis, Tennessee.

### Funding - Kidney Foundation

Drs. Graeme Hunter, Harvey Goldberg and Mikko Karttunen for obtaining a 2 year Grant-in-Aid award from the Kidney Foundation of Canada for the project titled: '*Inhibition of Calcium Oxalate Crystallization by Osteopontin*'

### Funding - CIHR Operating Grant

Drs. Harvey Goldberg, Graeme Hunter and Frank Beier for obtaining a 5 year CIHR operating award for the project titled: '*Functional Characterization of Bone Sialoprotein*'

### Dr. Les Kalman Needs Your Vote...

The first of its kind, Virtual Facebow is a new, digital replacement for the analogue version offering efficient and economical assistance with the diagnosis and treatment planning of all dental cases. [Click here](#) to cast your vote or to find out more about the contest. [Click here](#) for a previous Schulich Medicine & Dentistry story about the app.

### Upcoming: October 9, 2013 - Schulich Dentistry Research Day

The Schulich School of Medicine & Dentistry will host the Schulich Dentistry Annual Research Day on Wednesday, October 9, 2013. It will feature a presentation of student posters and the 12th John T. Hamilton Lecture, to be delivered by **Peter X. Ma**, MSc, PhD. Dr. Ma is currently the Richard H. Kingery Endowed Collegiate Professor of Dentistry at the University of Michigan. The Hamilton Lecture entitled "*Biomaterial Microenvironments for Stem Cells to Regenerate Dental and Craniofacial Tissues*", will be given in Auditorium A of University Hospital at 2:30pm. Student Poster Presentations will be held in the hallways of the Skeletal Biology Laboratories (DSB lower ground floor) at 1:00pm.

## 2013 AUGUST

### Dentistry Seminar Series Presentation

Dr. David Brigstock, Center for Clinical & Translational Research, The Research Institute at Nationwide Children's Hospital, Columbus, OH. "*The role of CCN2 in fibrosis*"

### Schulich Dentistry Summer Research Students

Schulich Dentistry Summer Research Students presented their summer research projects to fellow students and faculty on August 15th. The presenters included DDS Students who had been awarded summer studentships through Schulich School of Medicine and Dentistry and also DDS Students who were funded from external sources.



## 2013 JUNE



### High praise for Dental Research Student Workshop

The Network for Canadian Oral Health Research (NCOHR) wrapped up its inaugural Canadian Dental Research Student Workshops at the Schulich School of Medicine & Dentistry, entitled "**Careers in Academic Dentistry**". Organized by Dr. Walter Siqueira, the two-day Conference drew 90 participants from dental schools across the country. Along with poster presentations, it covered included such topics as effective writing for graduate school, leadership in academic institutions, the role of the dental clinician scientist and student research groups.

Here are some impressions:

**Walter Siqueira, DDS, PhD, Western University:** *"The conference was very good. I think we started to work together –the ten dental schools, we started to create this collaboration, and now we just need to keep the fire on, and continue to work together."*



**Akanksha Srivastava, McGill University** *"I work more in the public health research sector although it's not dental public health and I really want to thank the organizers of this workshop. It's one of the best I've attended so far. The thing is, coming from a very pure research background, we don't get to meet clinicians and graduate students with a clinical specialty and this workshop did a wonderful job of getting students from all sorts of fields together. Usually when you go to conferences they're very focused on one aspect only and you don't have that kind of interaction that we need when you're talking about research."*

**Nicole Johnson, Western dental student** *"I thought the conference was a great way to network and meet people from other universities across Canada, and in the research field and make long-lasting friendships and contacts."*

**Yasser Khaled, PhD candidate, U of Alberta.** *"I think this was probably the best workshop I've ever attended in my life. It was very interesting. I've got lots of new information and good news from it. I would suggest this workshop continue every year and maybe even semi-annually, because I think most of us, if not all, really benefitted from all the information we got especially with speakers from all over Canada."*

**Karen Ann Bridge, 3rd year dental student, Western University** *"In addition to offering students information about the career of clinician-scientist, the workshop was instrumental in fostering leadership skills, interview techniques and networking."*

**Reena Talwar, University of Alberta DDS, PhD FRCD, oral and maxillofacial surgery:** *"Western successfully organized and implemented the first Canadian Dental Research Student Workshop, which was appreciated by all who attended. We hope to maintain this high standard next year in Alberta."*

#### **Dr. Andrew Leask awarded EULAR Abstract Award**

Dr. Andrew Leask, Physiology and Pharmacology, Schulich Dentistry, was honoured with one of six European League Against Rheumatism (EULAR) Abstract Awards in Basic Science at a recent meeting in Madrid, Spain. This phenomenal accomplishment highlights the importance of Dr. Leask's research focused on fibrotic diseases that is caused by excessive and persistent formation of scar tissue. It affects those people living with a variety of different chronic diseases such as liver cirrhosis, diabetes, heart disease, lung fibrosis and scleroderma. There are no therapies on the market today that have been shown to stop or prevent fibrotic disease, which can result in organ failure and death for sufferers.

"Collectively 45 per cent of the deaths and health care costs in developed countries are caused by such diseases, and there is no cure. We want to understand how these diseases occur in the first place," stated Dr. Leask. "We do know that fibrosis is caused by the excessive production and remodeling of connective tissue by a certain cell type called a myofibroblast. The question we are asking is where did the myofibroblasts come from and how can we stop them from acting?"

Dr. Leask's abstract, entitled "A Novel Model of Systemic Sclerosis?: Loss of PTEN in Fibroblasts Results in Lung Fibrosis in a CCN2/CTGF-Dependent Fashion", focused on the lack of a tumor suppressor called PTEN, which the loss of is sufficient to generate myofibroblasts and fibrosis in mice. "We also have uncovered a potential mechanism of how the loss of PTEN causes fibrosis, which appears to also work on other models of fibrosis as well," explained Dr. Leask. "Thus we think that targeting this mechanism might result in a therapy for fibrosis".

The EULAR Congress, which hosted more than 14,000 people offered a wide range of topics including clinical innovations, clinical translational and basic science. Meetings were organized by people with arthritis, health professionals, and the health care industry. Now a major event in the calendar of world rheumatology, the annual EULAR congress is a significantly recognized platform to facilitate interactions between patients, medical doctors, scientists, health professionals and professionals representing the pharmaceutical industry.

#### **Dentistry Quintessence Research Award**

Patricia Brooks (DDS 2013) - The Quintessence Research Award is awarded on the recommendation of the Research Committee, following nomination by the faculty supervisors, to a graduating student who has been exemplary in research in the undergraduate dental program.

## 2013 MAY

### 6th Annual SUZANNE BERNIER Lecture

We are pleased to announce that Dr. Lisa A. Fortier, DVM, PhD will be the guest speaker for the 6th Annual SUZANNE BERNIER Lecture. The title of her talk will be *"Lessons learned from the equine model of cartilage injury and repair"*. Dr. Fortier is an Associate Professor of Large Animal Surgery, College of Veterinary Medicine, Cornell University. Her laboratory studies the intracellular pathways involved in the pathogenesis of osteoarthritis, and the clinical application of stem cells for cartilage repair. Fortier is the vice president of the International Veterinary Regenerative Medicine Society and the immediate past president of the International Cartilage Repair Society.

This lecture series and award honours Dr. Suzanne Bernier, a wonderful colleague, collaborator and mentor, who passed away in 2007. Dr. Bernier's research focused on the effects of extracellular matrix and inflammation on cartilage and as such, this lecture series highlights outstanding contributions to the field of musculoskeletal research. May 9, 2013 | 2:00pm | Aud A-University Hospital (Reception to follow)

### Dentistry Seminar Series Presentation

May 15 - Dr. Jorge Perdigão, Professor, Department of Restorative Sciences, Division of Operative Dentistry, University of Minnesota. *"Multi-mode adhesives - Are they reliable?"*

## 2013 APRIL

### Dentistry Seminar Series Presentation

April 10 - Anuradha Prakki, DDS, MSc, PhD, Assistant Professor, Restorative Dentistry, University of Toronto. *"Restorative Dental Resins: Physical and Biological Studies to Improve In-Service Stability"*

## 2013 March

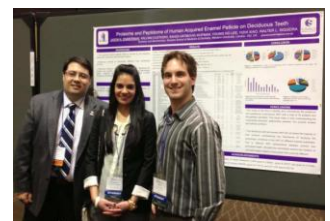
### Dr. Graeme Hunter wins Western Faculty Scholar's Award

Congratulations to Dr. Graeme K. Hunter, Professor and Chair, Oral Biology, on receiving a Western Faculty Scholar's Award. The Faculty Scholar's Award is to honour and celebrate outstanding scholarly achievements of individuals who are the leaders in their field and recognize the complete scholar who has achieved prominence in a select domain.

Dr. Hunter has certainly made a significant contribution to his research field of biomineralization and the training of research trainees, in addition to his major contributions in the field of history of science. The award includes a research grant of \$14,000 over 2 years that can be used in support of scholarly activities.

### Schulich Dentistry represented at IADR Conference

As the Salivary Research Group keynote speaker at the IADR Conference in Seattle, Dr. Walter Siqueira gave a presentation entitled "Molecular Interactions at Salivary Interfaces: New Insights from Proteomics and Molecular Dynamics". Two third-year dental students presented posters at the conference: Jason Zimmerman (supervised by Dr. Siqueira) presented a poster titled "Proteome and Peptidome of Acquired Enamel Pellicle on Deciduous Teeth", and Poonam Sekhon (supervised by Dr. Kofman) presented a poster titled "Comparison of the Microleakage of Hydrophilic and Hydrophobic Sealant".



## 2013 February

### Dr. Siqueira - CADR Councillor-at Large

The Canadian Association for Dental Research (CADR) Executive announced that Dr. Walter Siqueira (Dentistry) was acclaimed as Councillor-at-Large for a second term, 2013-2015.

### Dental Student Wins Research Travel Award



Canadian Institutes of Health Research (CIHR) has awarded Jason Zimmerman (Dents 2014) an ICS Travel Award based on his research in the Siqueira Lab. This award invites Jason to present his research at the IADR/AADR/CADR Meeting March 19-23, 2013 in Seattle, Washington.

## 2013 January

### Dr. Douglas Hamilton on Video

Watch as Dr. Douglas Hamilton discusses his drive to improve wound repair and regeneration in connective tissues with bio materials and how he hopes to see his research impact patients with non-closing wounds in the future. [Click here](#) to watch.

### Summer Student Research Program

Congratulations to the following students on winning a summer studentship with Dentistry's Summer Student Research Program.

Student		Supervisor
Leanna Dunn	Dents 2016	Dr. T. Ari
Mohammad Garshasb	Dents 2016	Dr. J. Santos
Holly Javidnia	Dents 2016	Dr. L. Kalman
Ziana Esmail	Dents 2016	Dr. C. Séguin
Nicole Johnston	Dents 2015	Dr. W. Siqueira
Joel Keshwah	Dents 2015	Dr. D. Hamilton
Matthew Kreher	Dents 2016	Dr. G. Santos
Kathleen Martin	Dents 2015	Dr. D. Hamilton
Duc Trung (Nick) Nguyen	Dents 2015	Dr. A. Rizkalla
Lu Lu Shen	Dents 2016	Dr. A. Leask
Ali Tanara	Dents 2016	Dr. M. Carrilho
Grant Vezina	Dents 2015	Dr. M. Carrilho